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VALVULAR HEART DISEASE

LONG-TERM OUTCOME OF AORTIC VALVE PLASTY UTILIZING AN AUTOLOGOUS PERICARDIAL PATCH IN PATIENTS WITH SEVERE AORTIC STENOSIS

ACC Poster Contributions
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Session Title: Valvular Disease- Therapeutic Options for Valvular Heart Disease
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Background: We report our experience with using an aortic valve plasty technique to repair a stenotic aortic valve.

Methods: One hundred forty patients underwent aortic valve plasty. Forty-one of these patients had a bicuspid valve. The characteristics of the patients were as follows: the mean age was 73 ± 9 years; the aortic valve area, 0.74 ± 0.20 cm2; the pressure gradient between the left ventricle and the aorta, 80.7 ± 29.7 mm Hg; and the left ventricular ejection fraction, 64 ± 13%. Aortic valve plasty was performed using our unique technique that creates an individual aortic valve from an autologous pericardial patch. Both transesophageal and transthoracic echocardiography were used to assess each patient's perioperative condition.

Results: There was no early mortality. Postoperative aortic regurgitation was absent in 90 patients, trivial in 49 patients, and mild in one patient. The peak systolic pressure gradient across the aortic valve was 18.5 ± 8.3 mm Hg after valve plasty. Peak systolic gradient was significantly lower in aortic valve plasty group compared with aortic valve replacement group using biosprosthetic valve with or without stent (18.5±8.3 vs 28.3±10.2, respectively, p< 0.0001).The peak systolic gradient was 15.9 ± 7.1 mm Hg after two years. Up to two years later, there was no significant increase in the peak systolic gradient or significant worsening in aortic regurgitation (Figure).

Conclusions: Aortic valve plasty is safe and feasible to treat patients with severe aortic stenosis.